

## **IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Inventors:	Kevin Collins, et al.	Examiner:	Alicia Baturay
Serial No.:	09/858,080	Group Art Unit:	2446
Filed:	May 15, 2001	Docket No.:	10006721-1
Title:	Method and Apparatus to Manage Transactions at a Network Storage Device		

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### **APPEAL BRIEF UNDER 37 C.F.R. § 41.37**

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

This Appeal Brief is filed in response to the Final Office Action mailed September 2, 2010 and Notice of Appeal mailed December 2, 2010.

### **AUTHORIZATION TO DEBIT ACCOUNT**

It is believed that no extensions of time or fees are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required (including fees for net addition of claims) are hereby authorized to be charged to Hewlett-Packard Development Company's deposit account no. 08-2025.

### **I. REAL PARTY IN INTEREST**

The real party in interest is Hewlett-Packard Development Company, LP, a limited partnership established under the laws of the State of Texas and having a principal place of business at 11445 Compaq Center Drive West, Houston, TX 77070, U.S.A. (hereinafter "HPDC"). HPDC is a Texas limited partnership and is a wholly-owned affiliate of Hewlett-Packard Company, a Delaware Corporation, headquartered in Palo Alto, CA. The general or managing partner of HPDC is HPQ Holdings, LLC.

## **II. RELATED APPEALS AND INTERFERENCES**

There are no known related appeals or interferences known to Appellant, Appellant's legal representative, or assignee that will directly affect or be directly affected by or have a bearing on the Appeal Board's decision in the pending appeal.

### **III. STATUS OF CLAIMS**

Claims 13 – 19 and 22 – 26 are pending in the application and stand finally rejected. Claims 1 – 12 and 20 – 21 were canceled. The rejection of claims 13 – 19 and 22 – 26 is appealed.

#### **IV. STATUS OF AMENDMENTS**

No amendments were made after receipt of the Final Office Action. All amendments have been entered.

## **V. SUMMARY OF CLAIMED SUBJECT MATTER**

The following provides a concise explanation of the subject matter recited in each of the independent claims involved in the appeal, referring to the specification by page and line number and to the drawings by reference characters, as required by 37 C.F.R. § 41.37(c)(1)(v). Each element of the claims is identified by a corresponding reference to the specification and drawings where applicable. Note that the citation to passages in the specification and drawings for each claim element does not imply that the limitations from the specification and drawings should be read into the corresponding claim element or that these are the sole sources in the specification supporting the claim features.

### **Claim 13**

A network storage device, comprising: (Figures 1 – 3 at 20)  
computer readable storage medium; (see lines 12-15 on p. 3)  
computer readable program code residing in said storage medium,  
including program code that is executed to: (Figures 1 – 3 at 30: see lines 5-7 on p. 6)

receive an incoming transaction (Figure 3 at 205) having a data field that includes a meta data field (Figure 3 at 225) with data and a priority field (Figure 3 at 227) with a requested priority; (Figure 6 at 500: see lines 11-14 on p. 15; lines 2-7 on p. 9)

define a usage policy that assigns a priority to the incoming transaction based on the data in the meta data field and that assigns priorities to outgoing transactions; (Figure 6 at 530: see lines 19-29 on p. 9; lines 16-17 on p. 15)

override the priority based on the data in the meta data field with the requested priority included in the priority field of the incoming transaction. (see lines 7-10 on p. 9; lines 17-19 on p. 13)

Claim 22

A method for managing transactions at a network storage device, comprising:

receiving, at the network storage device, an incoming transaction having a data field that includes a meta data field with data and a priority field with a requested priority; (Figure 6 at 500: see lines 11-14 on p. 15; lines 2-7 on p. 9)

assigning, by an agent at the network storage device, a priority to the incoming transaction based on the data in the meta data field satisfying a condition of a usage policy; (Figure 6 at 530: see lines 19-29 on p. 9; lines 16-17 on p. 15)

overriding, at the network storage device, the priority based on the data in the meta data field with the requested priority included in the priority field of the incoming transaction. (see lines 7-10 on p. 9; lines 17-19 on p. 13)

## **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

Claims 13 – 19 are rejected under 35 USC § 101 as being directed to non-statutory subject matter.

Claims 13 – 16, 19, and 22 – 24 are rejected under 35 USC § 103(a) as being unpatentable over US publication number 2002/0107971 (Bailey) in view of USPN 7,346,677 (Mohaban) and USPN 7,023,825 (Haumont).

Claims 17 and 25 are rejected under 35 USC § 103(a) as being unpatentable over US publication number 2002/0107971 (Bailey) in view of USPN 7,346,677 (Mohaban) and USPN 7,023,825 (Haumont) and USPN 6,157,963 (Courtright).

Claims 18 and 26 are rejected under 35 USC § 103(a) as being unpatentable over US publication number 2002/0107971 (Bailey) in view of USPN 7,346,677 (Mohaban) and USPN 7,023,825 (Haumont) and US publication number 2002/0049778 (Bell).

## **VII. ARGUMENT**

The rejection of claims 13 – 19 and 22 – 26 is improper, and Appellants respectfully request reversal of these rejections.

The claims do not stand or fall together. Instead, Appellants present separate arguments for various independent and dependent claims. Each of these arguments is separately argued below and presented with separate headings and sub-heading as required by 37 C.F.R. § 41.37(c)(1)(vii).

### **Claim Rejections: 35 USC § 101**

Claims 13 – 19 are rejected under 35 USC § 101 as being directed to non-statutory subject matter. These rejections are traversed.

Claims 13 – 19 are apparatus claims directed to a network storage device. The specification expressly teaches that the network attached storage device is a physical machine. For example, Figures 2 and 3 show a network attached storage device 20 with an agent 30, a usage policy 250, and physical storage 299. Nowhere does the specification teach or even suggest that the network attached storage device is not a physical machine or apparatus.

The examiner argues that because the physical machine (i.e., the network attached storage device) recited in claim 13 includes a computer readable medium, then the claim is directed to non-statutory subject matter. This argument is not correct since claim 13 is clearly directed to a machine or apparatus as stated in the preamble. The inclusion of a computer readable medium in such a machine or apparatus does not therefore make this machine or apparatus non-statutory as argued by the examiner.

The examiner argues that the computer readable storage medium of claim 13 would include carrier waves and signals. This is not accurate. Claim 13 recites computer readable program code that resides on the computer readable storage medium located in the network attached storage device. A carrier wave or signal cannot be computer readable program code residing in a computer readable storage medium.

The machine-or-transformation test announced in *Bilski* provides a useful clue as to showing that claim 13 is a machine or apparatus and thus directed to statutory subject matter. In order to qualify as being patentable under section 101, the claims must be tied to a particular machine or apparatus. Claim 13 expressly recites a network attached storage device which (as shown in the specification and known to one of ordinary skill in the art) is a machine.

For at least these reasons, claims 13 – 19 are directed to statutory subject matter per 35 USC § 101.

### **Claim Rejections: 35 USC § 103(a)**

Claims 13 – 16, 19, and 22 – 24 are rejected under 35 USC § 103(a) as being unpatentable over US publication number 2002/0107971 (Bailey) in view of USPN 7,346,677 (Mohaban) and USPN 7,023,825 (Haumont). These rejections are traversed.

### Principles of Law: Obviousness

The test for determining if a claim is rendered obvious by one or more references for purposes of a rejection under 35 U.S.C. § 103 is set forth in *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398, 82 USPQ2d 1385 (2007):

Under §103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. Quoting *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966).

As set forth in MPEP 2143.03, to ascertain the differences between the prior art and the claims at issue, “[a]ll claim limitations must be considered” because “all words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 1385.

According to the Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in view of *KSR International Co. v. Teleflex Inc.*, Federal Register, Vol. 72, No. 195, 57526, 57529 (October 10, 2007), once the *Graham* factual inquiries are resolved, there must be a determination of whether the claimed invention would have been obvious to one of ordinary skill in the art based on any one of the following proper rationales:

(A) Combining prior art elements according to known methods to yield predictable results; (B) Simple substitution of one known element for another to obtain predictable results; (C) Use of known technique to improve similar devices (methods, or products) in the same way; (D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results; (E) “Obvious to try”—choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success; (F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations would have been predictable to one of ordinary skill in the art; (G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention. *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398, 82 USPQ2d 1385 (2007).

Furthermore, as set forth in *KSR International Co. v. Teleflex Inc.*, quoting from *In re Kahn*, 441 F.3d 977, 988 (CA Fed. 2006), “[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements;

instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.”

Therefore, if the above-identified criteria and rationales are not met, then the cited reference(s) fails to render obvious the claim and, thus, the claim is distinguishable over the cited reference(s).

#### Differences Between the Art and Claims

Claims 13 – 16, 19, and 22 – 24 recite one or more elements that are not taught or suggested in Bailey in view of Mohaban and Haumont. These missing elements show that the differences between the combined teachings in the art and the recitations in the claims are great. As such, the pending claims are not obvious in view of or a predictable variation of the art to one of ordinary skill in the art.

These differences are shown below and presented with separate headings for different claim groups.

#### Sub-Heading: Claims 13 – 16, 19, and 22 – 24

Independent claim 13 is selected for discussion.

As one example, independent claim 13 recites a usage policy that assigns a priority to the incoming transaction based on the data in the meta data field and that assigns priorities to outgoing transactions. The claim then recites the priority based on the data in the meta data field is overridden with the requested priority included in the priority field of the incoming transaction. Bailey in view of Mohaban and Haumont does not teach or suggest these elements.

Bailey teaches a network system in which requests for files include a quality of service (QoS) parameter. This QoS parameter indicates the priority of service with which a client will receive the file (see paragraph [0082]). Thus, the file is prioritized through the system and delivered to the client based on the priority of the QoS parameter.

Mohaban teaches a data packet that includes a user priority field. Network devices receive the packet and apply a priority to the packet based on the value in the priority field (see Mohaban at col. 2, lines 55-61).

Haumont teaches a communication system that delivers packets to and from wireless mobile devices. Quality of service (QoS) defines how the packets are delivered through the communication system.

The combination of Bailey in view of Mohaban and Haumont teaches a communication system in which packets are delivered according to a specified QoS. This QoS can be specified in the packet itself (i.e., in a priority field of the packet) or specified as a parameter associated with the packet. Nowhere does Bailey in view of Mohaban and Haumont teach or even suggest that QoS data overrides a priority based on data in a meta data field with a requested priority that was included in a priority field of the incoming transaction. Instead, Bailey in view of Mohaban and Haumont teaches that the packet is delivered in accordance with the QoS assigned to the packet.

For at least the reasons, claims 13 – 16, 19, and 22 – 24 are allowable over Bailey in view of Mohaban and Haumont.

#### Response to Examiner's Argument

The examiner admits that “Bailey and Mohaban does not explicitly teach overriding the priority based on the data in the meta data field with the requested priority included in the priority field of the incoming transaction” (see FOA at p. 4). Appellants agree with this admission. The examiner, however, attempts to cure this deficiency with Haumont at column 9, lines 26-29. Appellants respectfully disagree.

Haumont teaches that a source can use a flow label that provides a router with specific instructions for handling a packet (see col. 9, lines 18-20). Haumont at column 9, lines 26-29 merely teaches that a precedence can be indicated for each packet when not part of the QoS profile ... “or it overrides that value of the flow.” Thus, although Haumont uses the word “overrides” in column 9, this word is used to describe a precedence that can override a flow label. This section of

Haumont does not teach or even suggest that a priority based on the data in the meta data field is overridden with the requested priority included in the priority field of the incoming transaction. The precedence in Haumont is not included in a priority filed of the packet. Also, Haumont does not teach that the precedence overrides a priority in metadata field. Instead, Haumont states that the precedence is “not part of the QoS profile.”

Sub-Heading: Claim 19

Dependent claim 19 recites wherein an agent in the network storage device assigns a priority to the incoming transaction based on the data in the meta data field. The examiner argues that this recitation is taught in paragraph [0082] of Bailey. Appellants respectfully disagree.

Paragraph [0082] in Bailey teaches that a request for a file include a QoS parameter. Nowhere does Bailey teach or even suggest that this QoS parameter would be “in the meta data field” as recited in claim 19. In fact, Mobaban reinforces the teaching that the QoS would be located in the priority field, not the meta data field. There is no teaching whatsoever in Bailey to place the QoS parameter in the meta data field of the packet.

For at least the reasons, claim 19 is allowable over Bailey in view of Mohaban and Haumont.

Sub-Heading: Claim 24

Dependent claim 24 recites the priority based on the data in the meta data field includes an application ID of an application originating the incoming transaction. The examiner argues that this recitation is taught in Mohaban at col. 13, lines 17-32. Appellants respectfully disagree.

Mohaban at col. 13, lines 17-32 teaches a policy statement that describes a traffic flows for applications. This policy statement includes conditions, such as policy identifiers (e.g., URL) and operators. Nowhere does this section of Mohaban teach or even suggest that the meta data field includes an application ID of an application originating the incoming transaction.

For at least the reasons, claim 24 is allowable over Bailey in view of Mohaban and Haumont.

**Claim Rejections: 35 USC § 103(a)**

Claims 17 and 25 are rejected under 35 USC § 103(a) as being unpatentable over US publication number 2002/0107971 (Bailey) in view of USPN 7,346,677 (Mohaban) and USPN 7,023,825 (Haumont) and USPN 6,157,963 (Courtright). These rejections are traversed.

As explained above, Bailey in view of Mohaban and Haumont fails to teach or suggest all of the elements of independent claims 13 and 22. Courtright fails to cure these deficiencies. For at least the reasons given with respect to the independent claims, respective dependent claims 17 and 25 are allowable over Bailey in view of Mohaban, Haumont, and Courtright.

Sub-Heading: Claims 17 and 25

Dependent claim 17 is selected for discussion

Dependent claim 17 recites the meta data field includes both a user ID and a purpose for accessing the network storage device. The examiner argues that this recitation is taught in Courtright. Appellants respectfully disagree.

Courtright teaches I/O requests are placed in a queue according to priorities associated with clients, such as storage user priorities (i.e., priorities associated with a particular user). Further, Courtright teaches that frequently accessed data is placed in a cache. Nowhere does Courtright teach or even suggest that the meta data field includes **both** a user ID and a purpose for accessing the network storage device.

For at least the reasons, claims 17 and 25 are allowable over Bailey in view of Mohaban, Haumont, and Courtright.

**Claim Rejections: 35 USC § 103(a)**

Claims 18 and 26 are rejected under 35 USC § 103(a) as being unpatentable over US publication number 2002/0107971 (Bailey) in view of

USPN 7,346,677 (Mohaban) and USPN 7,023,825 (Haumont) and US publication number 2002/0049778 (Bell). These rejections are traversed.

As explained above, Bailey in view of Mohaban and Haumont fails to teach or suggest all of the elements of independent claims 13 and 22. Bell fails to cure these deficiencies. For at least the reasons given with respect to the independent claims, respective dependent claims 18 and 26 are allowable over Bailey in view of Mohaban, Haumont, and Bell.

Sub-Heading: Claims 18 and 26

Dependent claim 18 is selected for discussion

Dependent claim 18 recites the priority based on the data in the meta data field includes a particular partition of the network storage device. The examiner argues that this recitation is taught in Bell at paragraph 69. Appellants respectfully disagree.

Paragraph 69 in Bell teaches that a backup agent identifies the location of physical blocks of a file and then communicates this information to a backup server. **This section of Bell is not related whatsoever to the recitations of claim 18.** Nowhere does this paragraph teach or even suggest that meta data field includes a particular partition of the network storage device.

For at least the reasons, claims 18 and 26 are allowable over Bailey in view of Mohaban, Haumont, and Bell.

### **CONCLUSION**

In view of the above, Appellants respectfully request the Board of Appeals to reverse the Examiner's rejection of all pending claims.

Any inquiry regarding this Amendment and Response should be directed to Philip S. Lyren at Telephone No. 832-236-5529. In addition, all correspondence should continue to be directed to the following address:

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Respectfully submitted,

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### **VIII. Claims Appendix**

1. – 12. (canceled)

13. A network storage device, comprising:

computer readable storage medium; and

computer readable program code residing in said storage medium,

including program code that is executed to:

receive an incoming transaction having a data field that includes a meta data field with data and a priority field with a requested priority;

define a usage policy that assigns a priority to the incoming transaction based on the data in the meta data field and that assigns priorities to outgoing transactions; and

override the priority based on the data in the meta data field with the requested priority included in the priority field of the incoming transaction.

14. The network storage device of claim 13, wherein said program code is further executed to:

read, by an agent in the network storage device, the data in the meta data field;

compare the data to conditions defined in a table having the usage policy;

and

prioritize the incoming transaction based on a comparison of the data to the conditions in the table.

15. The network storage device of claim 13, wherein said computer readable program code further comprises program code for identifying said network storage device, and wherein said network storage device is a NAS device.

16. The network storage device of claim 13, wherein the priority based on the data in the meta data field is based on an application ID of an application originating the incoming transaction.

17. The network storage device of claim 13, wherein the meta data field includes both a user ID and a purpose for accessing the network storage device.

18. The network storage device of claim 13, wherein the priority based on the data in the meta data field includes a particular partition of the network storage device.

19. The network storage device of claim 13, wherein an agent in the network storage device assigns a priority to the incoming transaction based on the data in the meta data field.

20. – 21. (canceled)

22. A method for managing transactions at a network storage device, comprising:

receiving, at the network storage device, an incoming transaction having a data field that includes a meta data field with data and a priority field with a requested priority;

assigning, by an agent at the network storage device, a priority to the incoming transaction based on the data in the meta data field satisfying a condition of a usage policy; and

overriding, at the network storage device, the priority based on the data in the meta data field with the requested priority included in the priority field of the incoming transaction.

23. The method of claim 22 further comprising:

reading, by the agent, the data in the meta data field;  
comparing the data to conditions defined in a table having the usage policy;  
prioritizing the incoming transaction based on a comparison of the data to the conditions in the table.

24. The method of claim 22, wherein said priority based on the data in the meta data field includes an application ID of an application originating the incoming transaction.

25. The method of claim 22, wherein the priority based on the data in the meta data field includes both a user ID and a purpose for accessing the network storage device.

26. The method of claim 22, wherein the priority based on the data in the meta data field includes a particular partition of the network storage device.

**IX. EVIDENCE APPENDIX**

None.

**X. RELATED PROCEEDINGS APPENDIX**

None.